Presenting, Researching and Composing with Multimedia
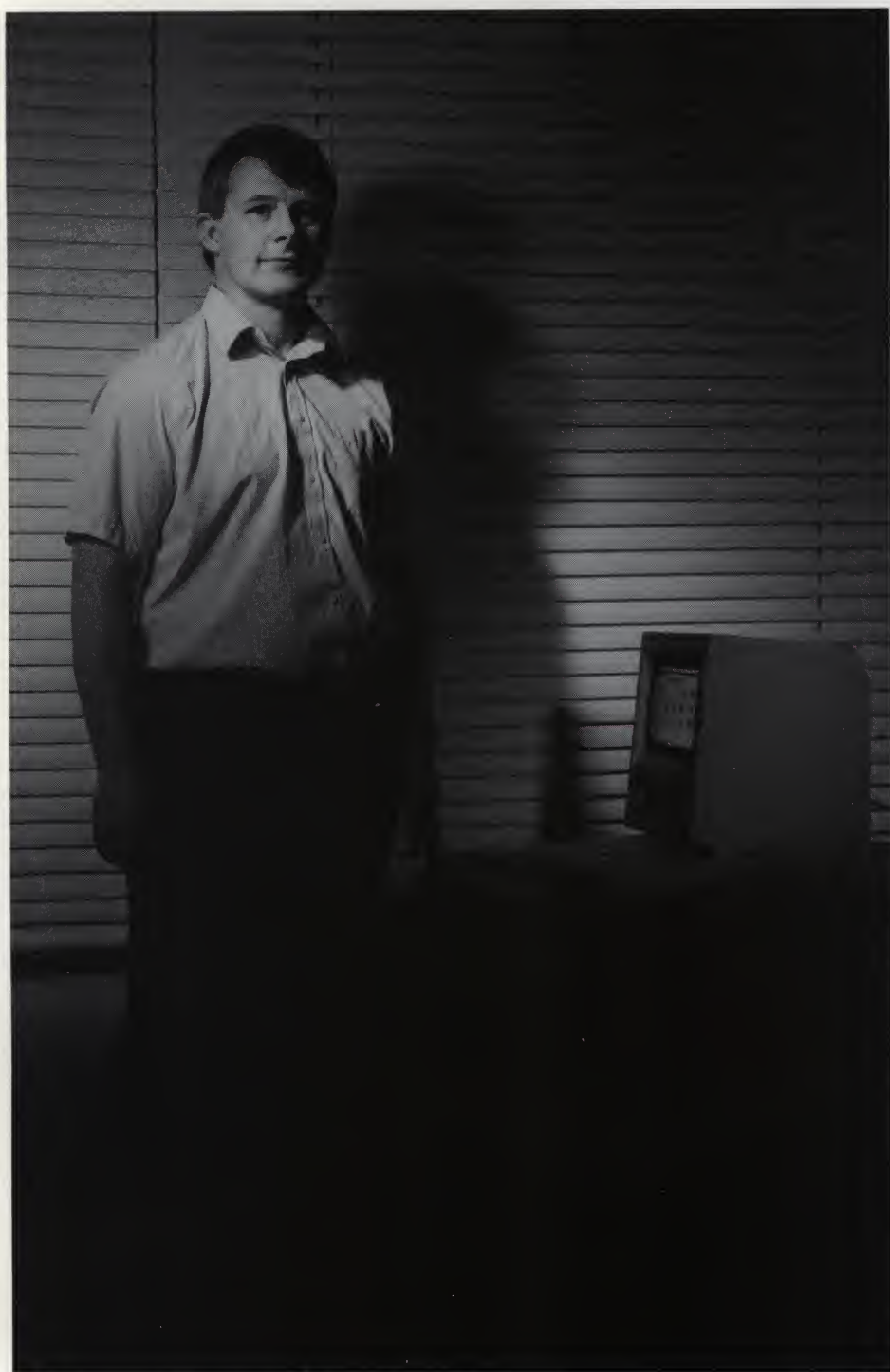
The use of Apple™ multimedia products has the potential to revolutionise education, according to Ian Carter, head of IT at Cheltenham College, one of the country's leading technology schools in the private sector.

Carter, a biology teacher, became involved in IT five years ago. While over 70 Apple Macintosh™ personal computers are being used throughout the college for a whole variety of applications ranging from writing and publishing, to design and modelling, to music composition and score writing via a MIDI system, Carter sees interactive multimedia as providing the most exciting and far reaching opportunities.

New and exciting generation of CD-ROMs

According to Carter a new and exciting generation of CDs are currently being produced which will make a CD-ROM drive an essential peripheral to the Apple Macintosh. One example is the Grolier Academic American Encyclopaedia, which gives children the chance to search through 10 million words and 30,000 articles which can be saved and printed out. The Guinness Disc of Records CD-ROM uses HyperCard™ to integrate text, pictures and animated sequences with digitised sound. The information is brought to life in a way that is just not possible with printed materials. For music teachers, there is the Beethoven CD from Voyager Company. The celebrated scholar Robert Winter communicates his musical knowledge through a HyperCard stack synchronised to a CD-Audio disc of Beethoven's 9th symphony. Students

can pause at any time to look up technical terms or browse through text on the cultural and social influences on Beethoven at the time.

"From an educational perspective, it's very important that students can take their own path through these information bases, making comparisons and associations, because it is this process that is fundamental to learning, and HyperCard makes this very easy to do" comments Carter.

Videodiscs provide vast repositories of visual material

At Cheltenham many different videodiscs are used for presentations, ranging from works of art in the Washington National Gallery of Art, to Regard for the Planet - a compilation of 55,000 slides, representing 30 years work of the photographer Marc Garanger. Some discs come with HyperCard stacks cataloguing their content and providing the means to navigate throughout the material and find related information. "For other videodiscs it's very easy to create stacks to access the images you need with one of the HyperCard video toolkits available," says Carter.

When used for classroom presentations, teachers can sequence pictures in any order and can present them on a monitor, video screen or overhead projector either individually or all at once. The presentation can be stopped at any time and written text relating to the picture can be called up. Once the presentation has been prepared it can be used for further repeat lectures or easily modified to meet other needs. Currently music,

biology and art are being taught this way at Cheltenham.

Students are Composers

Another use for multimedia is as a presentation medium for students themselves. As part of the national curriculum GCSE English language exam, students are required to give a five minute talk on any subject. At Cheltenham, they compose multimedia presentations by creating HyperCard stacks which access existing images as well as accompanying text they have prepared. Carter points out "This really helps the students get involved with the material they are presenting and, as a result, they are much more confident and articulate."

Getting the best out of new and existing media

One fascinating application which illustrates the power of multimedia to cross disciplines and integrate with existing teaching methods is MacSat™. Cheltenham College has a satellite receiver which takes instantaneous weather data and translates it into Apple Macintosh format and outputs it as a photographic image on screen. Students can see weather fronts developing all over the world and can create their own animations of real weather patterns using the Apple Macintosh based animation package, Macromind Director™. Science students can, for example, see the coloured swirls of ocean currents, geography students can analyse weather patterns over high and low ground and art students can develop ways of presenting the different information. They can also output the information in printed

form, i.e. photographs and text, to supplement traditional ways of learning. Says Carter, "Coming away with something at the end of it, means they get the best out of both the printed and electronic media".

HyperCard the integrator

Carter observes, "The Apple Macintosh with HyperCard acts like a bus terminus. You can hook anything into it; hardware or software - an audio CD toolkit, a videodisc, or even a scanner. No other software can integrate so many things so easily."

According to Carter, it's really thanks to Apple that multimedia is happening. "When you buy an Apple Macintosh you are getting quality, ease of use, something that is well integrated and that works. There's an enormous user base and it's a machine that's bridging the gap between business and education. Apple is also full of innovative people researching new products and applications."

Looking to the future of interactive multimedia in education Carter predicts: "The teacher will become more of a partner in a shared learning activity, rather than solely a disseminator of information. The learning will have to be guided, which implies more of a management role and organising the students into groups with different tasks. In fact the biggest challenge over the next three years, as multimedia comes in, faces teachers, who will have to learn ways of utilising and managing the technology - but the opportunities are immense and well worth the effort".

Find Out More About Interactive Multimedia

There are more than 180 Apple Authorised Dealers around
the country who will be happy to give you full details of
our approach to interactive multimedia. Your local dealer
can arrange for you to see demonstrations of interactive
multimedia applications available today and show you the
products available to help you create your own.

Apple Computer has published an "Apple Guide to
Multimedia Development Tools", this provides details of
both software and hardware products available to assist
you in the preparation and delivery of interactive
multimedia materials.

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